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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/909,229	07/19/2001	James Leo Czekaj	10541/421 V200-0758	9724

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EXAMINER	
PATHAK, SUDHANSHU C	
ART UNIT	**PAPER NUMBER**
2634	

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/909,229	CZEKAJ ET AL.	
	Examiner	Art Unit	
	Sudhanshu C. Pathak	2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *April 1st, 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16 and 19-35* is/are rejected.

7)☒ Claim(s) *17 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *July 19th, 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-to-35 are pending in the application.

Claim Objections

2. Claims 1 & 5 are objected to because of the following informalities:

Regarding to Claim 1, the claim discloses ".....converting the source information as a function.....", this should actually be ".....converting the received digital information as a function.....".

Claim 5, line 1, discloses ".....comprises inVan der Puttening at least....." this should actually be ".....comprises inputting at least.....".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 3, 11-24 & 34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding to Claims 3, 11-24 & 34, the claims contain the subject matter of ".....counting the first rate to generate a source counter value (CV(m))....." The specification describes this as a counter value "CV(m)" which is a digital representation of the sample rate of the source sample rate (Specification,

Page 16, 13-15). Furthermore, the specification also discloses multiple sources and sinks operating at various sample rates (Specification, Page 2, lines 18-24). Furthermore, Fig. 3 discloses a plurality of network frames wherein the figure describes a network frame in further detail (Fig. 3, element 48), comprising a source counter value (Fig. 3, element 46), a first source information (Fig. 3, element 42) and a second source information (Fig. 3, element 44), however, the specification does not describe, in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention, that if each source (first and second) as described in the figure are operating at different sample rates from one another, then it is not clear which source (sample rate) the counter value would represent, since the figure shows one counter value in the frame representing data from multiple sources.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-2, 4-7, 9-10, 25-33 & 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant Admitted Prior Art (AAPA) in view of Lau (4,961,188).

Regarding to Claims 1-2, 4-7, 9-10, 25-33 & 35, the Applicant Admitted Prior Art (AAPA) discloses a method of transmitting digital information over a synchronous network (Specification, Page 1, lines 9-20). The AAPA also discloses the communication between a source (input node where data is originated to be transmitted over the network) coupled to the network and a sink (output node where the transmitted data is received) which is also coupled to the network, furthermore the AAPA also discloses node in the network to be a source/sink depending on the flow of the data (Specification, Page 1, lines 9-14 & Specification, Page 2, lines 10-20 & Specification, Page 7, lines 10-24 & Specification, Page 8, lines 1-11). The AAPA also discloses in synchronous network comprising the sample rate of the digital information processed by the source/sink is different from the network master clock rate (Specification, Page 2, lines 10-14). The AAPA also discloses that in a synchronous network the data is transmitted in the form of network frames separated by equal time intervals wherein the time intervals and the network frames are fixed at the network master clock rate and the operation of the source and the sink are synchronized with the frequency of the network master clock (Specification, Page 1, lines 15-20 & Specification, Page 2, lines 10-11). The AAPA also discloses implementing a sample rate converter for synchronizing the source/sink rate to the frequency of the network master clock from the source/sink sample rate (Specification, Page 2, lines 14-17). The AAPA also discloses the sink portion of the node to comprise a buffer to store the network counter value (NCV) and the digital information supplied

over the synchronous network (Specification, Page 18, lines 8-10). The AAPA also discloses the sample rate converter capable of extracting the digital information and the network counter value (Specification, Page 18, lines 15-18). The AAPA also discloses the synchronous data transfer standards for synchronous network include media oriented system transport (most) and domestic databus (D2B) wherein the source/sink nodes establish connection to the network using modems, ISDN connections, DSL connections etc. (Specification, Page 7, lines 14-24 & Specification, Page 8, lines 1-17). The AAPA also discloses the network comprising multiple sources and nodes operating at a rate different (higher and/or lower) than the network master clock rate (Specification, Page 2, lines 10-20). However, the AAPA does not explicitly disclose sample rate converting the received digital information as a function of the various sample rates.

Lau discloses a method and apparatus for recovering the timing of source node at the destination node of a synchronous telecommunication network (Abstract, lines 1-5 & Fig. 1 & Column 2, lines 13-15). Lau also discloses a source rate "f_s" and a network clock frequency "f_c" (Column 4, lines 23-30, 51-63). Lau further discloses sample rate converting the received digital information as a function of the source node service frequency and the network clock frequency (Column 5, lines 1-21, 47-68 & Column 7, lines 1-14 & Abstract, lines 7-21). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Lau teaches a method and apparatus for recovering the timing source node at the destination node

of a synchronous telecommunication network and this can be implemented in the network as described in the AAPA so as to recover the clock despite jitter and further providing a simpler clock recovery system so as to provide the source clock and the received data to the destination node.

7. Claims 3, 11-15, 19-21, 23-24 & 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant Admitted Prior Art (AAPA) in view of Lau (4,961,188) in further view of Van der Putten et al. (6,327,273).

Regarding to Claims 3, 11-15, 19-21, 23-24 & 34, the Applicant Admitted Prior Art (AAPA) in view of Lau discloses a method for communication in a synchronous network between a sink/source ports wherein the source sample rate is transported to the sink from the source so as to implement the sample rate converter at the sink as described above. However, the AAPA in view of Lau does not disclose a counter to count the source sample rate and to generate a count value and transmitting the source counter value as part of the digital information.

Van der Putten discloses a method for to transparently transporting an incoming clock of a known frequency over a network (clock transport method) wherein the transmitter and receiver are synchronized (Abstract, lines 1-5 & Column 1, lines 13-26). Van der Putten also discloses transmitting the data and the information of the incoming clock (Fig. 1, elements "CLK2, CLK2') from the source to the sink in frames at a frequency of the transmit clock (Column 1, lines 30-35 & Column 2, lines 12-17, 44-59 & Column 3, lines 1-

11 & Column 4, lines 50-59 & Column 5, lines 23-26, 59-65 & Column 6, lines 29-45 & Fig. 1, elements "C1", "R", CLK1, C1', R' CLK1'). Van der Putten also discloses embedding the information of the incoming clock rate along with the data to be transported into the data frame of the network which is then de-embed at the receiver to recover the data and the clock information (Fig. 1, element "P", "FRAME" & Column 5, lines 44-67 & Column 6, lines 1-53 & Claim 1). Van der Putten further discloses event counter mechanism so as to store (measure) the information of the incoming clock (Column 5, lines 55-67 & Column 6, lines 1-3). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Van der Putten teaches implementing an event counter mechanism so as to store (measure) the information of the incoming clock and this can be implemented in the system as described in the AAPA in view of Lau so as to transmit the source data rate to the sink node embedded in the frame of the network so as to provide the necessary information to implement the source rate conversion in the destination node. Furthermore, there is no criticality in inputting at least two source information words into the network frame for transmitting over the synchronous network, this is a matter of design choice depending on the choice of the source information rate and the network clock rate.

8. Claims 8, 16 & 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant Admitted Prior Art (AAPA) in view of Lau (4,961,188) in further view of Binder et al. (6,009,109).

Regarding to Claims 8, 16 & 22, the Applicant Admitted Prior Art (AAPA) in view of Lau discloses a method for communication in a synchronous network between a sink/source ports wherein the source sample rate is transported to the sink from the source so as to implement the sample rate converter at the sink as described above. However, the AAPA in view of Lau does not specify ignoring a portion of the source information as a function of the first and second rate.

Binder discloses a process of transmission of digital data wherein the application data timing is independent of the network clock rate (Fig.'s 1-2 & Abstract, lines 11-17 & Column 1, lines 7-14, 40-64). Binder further discloses the network clock being greater than the data sample rate, thus oversampling the data signal for transmission (Abstract, lines 1-6 & Fig.'s 1-2 & Column 1, lines 25-35 & Column 2, lines 29-56). Binder further discloses ignoring the redundant (oversampled) digital data as a function of the first and second rate (Fig.'s 1-2, elements ".:.", "EXOR", "BF", "D-FF2" & Column 2, lines 65-67 & Column 3, lines 1-12). Therefore, it would have been obvious to one of ordinary skill in the at the time of the invention that Binder teaches oversampling the digital data in the transmitter and at the receiver ignoring the redundant data to regenerate the transmitted data, and this can be implemented in the network as described in the AAPA in view of Lau as a data rate converter when the network clock is greater than the source sample data to retrieve the transmitted data, thus satisfying the limitations of the claims.

Allowable Subject Matter

9. Claims 17 & 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments with respect to claims 1-16 & 19-35 have been considered but are moot in view of the new ground(s) of rejection. In regards to the rejection as written above the AAPA (Applicant Admitted Prior Art) reference discloses all the limitations of the invention i.e. a source node, a sink node, and a sample rate converter wherein the source / sink sample rate are different than the network sample rate wherein the sample rate converter synchronizes the source/sink to the network. However, the AAPA does not specify transmitting the source sample rate as a counter value within the transmitted frame and the sample rate conversion is performed in the sink node. The Lau reference discloses transmitting the source clock information to the sink node over a synchronous network wherein the source sample rate is recovered at the sink node. However, the AAPA in view of Lau reference does not explicitly discloses the source information transmitted to the sink is the source counter value representing the source sample rate. The Van der Putten reference discloses an event counter mechanism so as to store clock information and embedded the information in the transmitted frame. Therefore, it would have been obvious to one of ordinary skill in the art at

the time of the invention that the AAPA in view of Lau in further view of Van der Putten discloses all the limitations of the claims for transmitting data between a sources and sinks in a synchronous network. Furthermore, the Binder reference discloses a process of transmission wherein as the clocks are different the redundant information is ignored.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sudhanshu C. Pathak whose telephone number is (571)-272-3038. The examiner can normally be reached on M-F: 9am-6pm.

- If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571)-272-3056
- The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

- Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sudhanshu C. Pathak

STEPHEN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

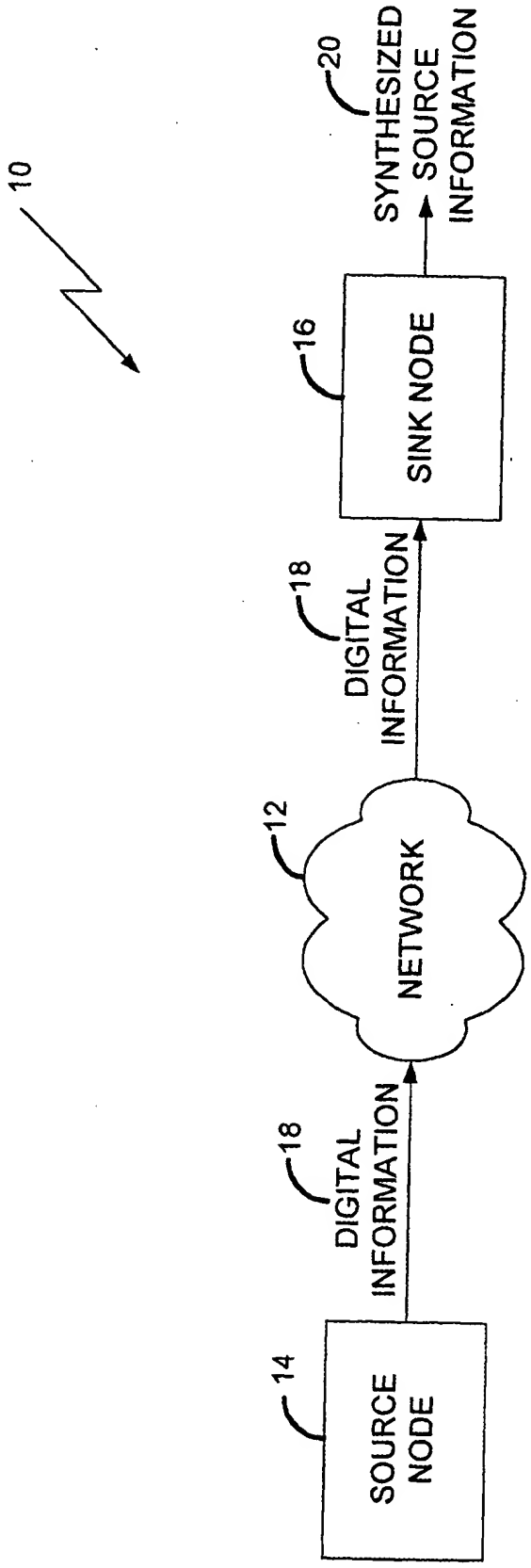
10
20
SYNTHESIZED SOURCE INFORMATION
16
SINK NODE
18
DIGITAL INFORMATION
12
NETWORK
18
DIGITAL INFORMATION
14
SOURCE NODE

FIG. 1

T0610"62606O

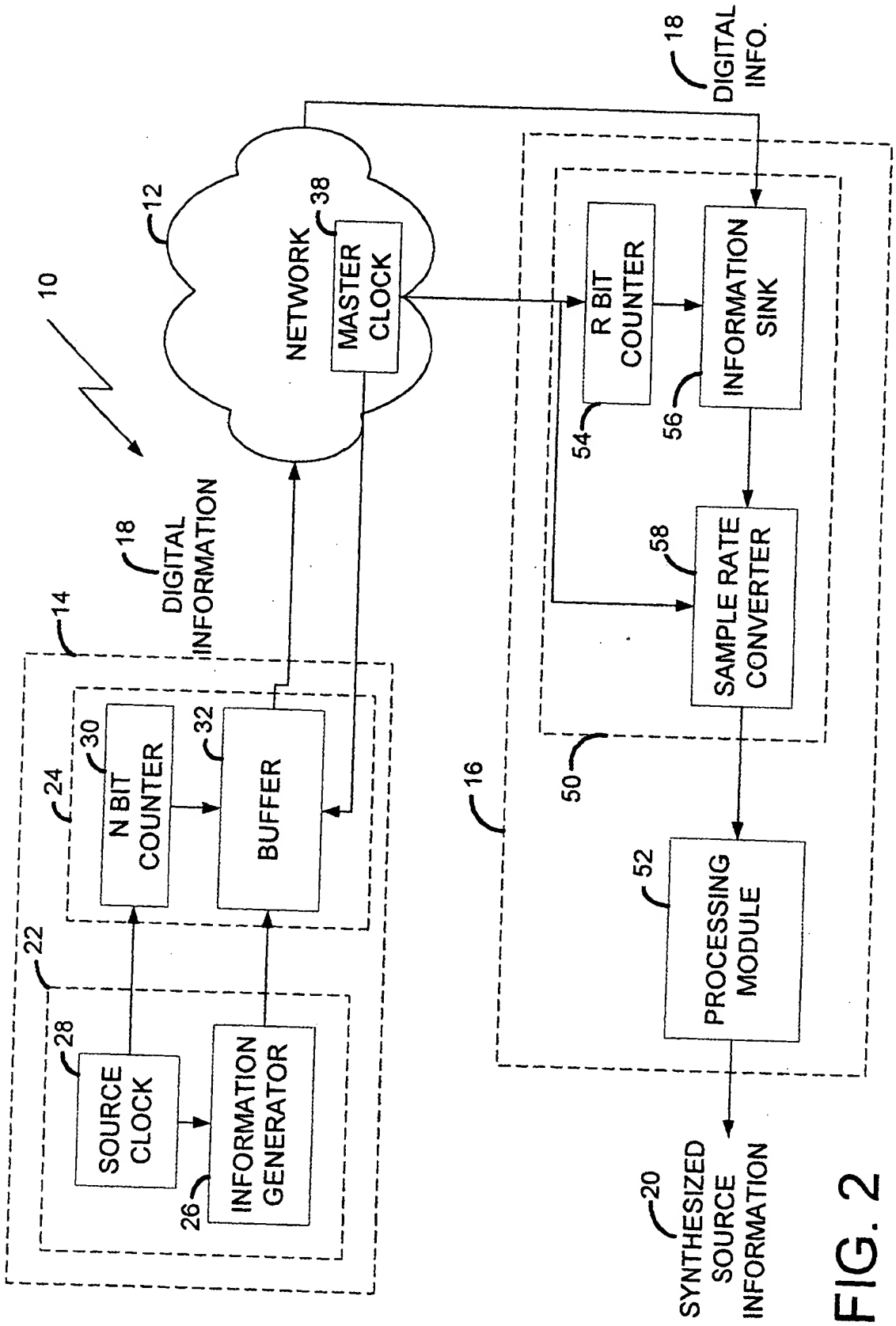

FIG. 2

T0647D*62260660

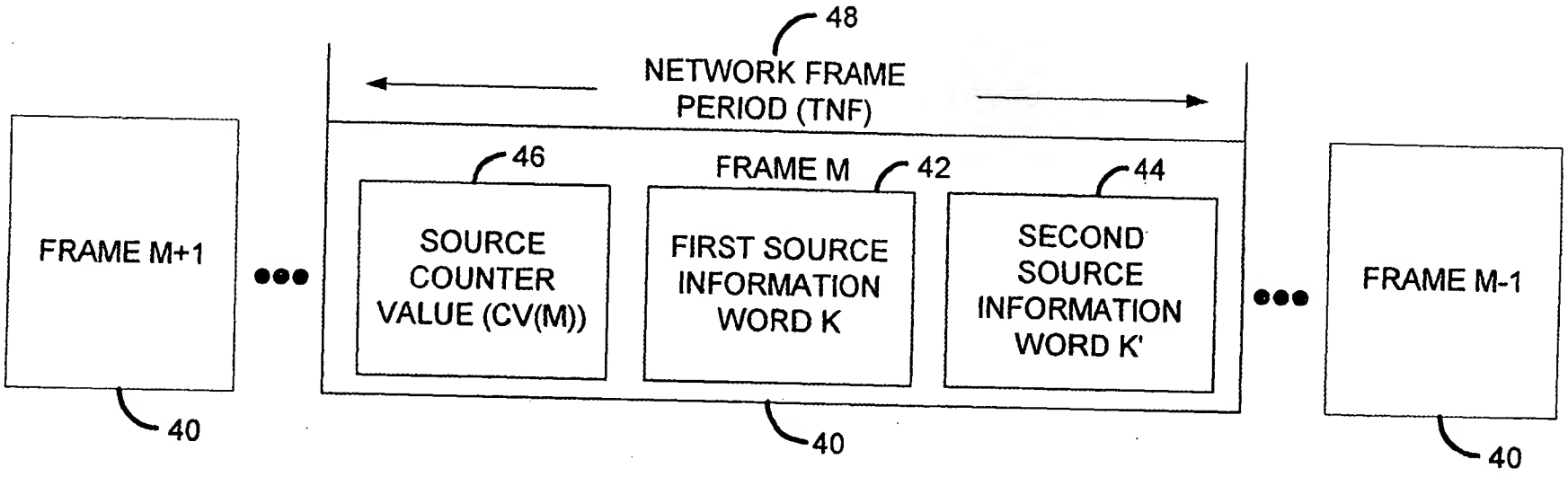

FIG. 3

For SYSTEM & METHOD FOR TRANSMISSION OF DIGITAL INFORMATION OF VARYING SAMPLE RATES OVER A SYNCHRONOUS NETWORK
Inventor: James Leo Czekaj et al Atty. Docket: 10541/421 V200-758

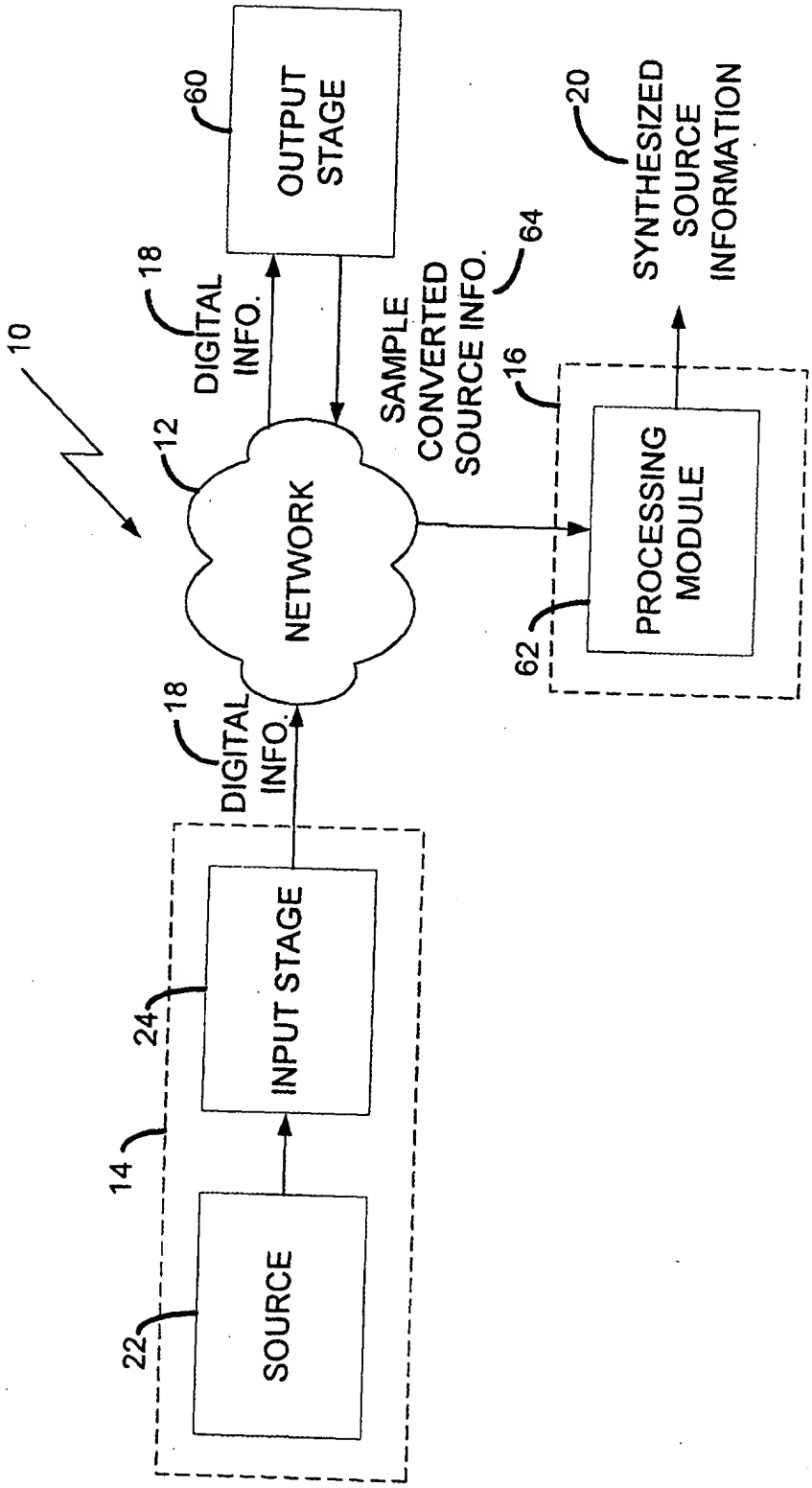
10
12
NETWORK
14
16
18
DIGITAL INFO.
18
DIGITAL INFO.
20
SYNTHESIZED SOURCE INFORMATION
22
SOURCE
24
INPUT STAGE
60
OUTPUT STAGE
62
PROCESSING MODULE
64
SAMPLE CONVERTED SOURCE INFO.

FIG. 4